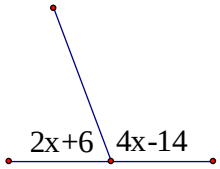
Name: _____ Period: _____

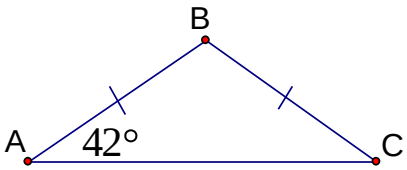
GEOMETRY (CP) → FINAL EXAM REVIEW

1. In the diagram, what is the value of *x*?



2. ∠A and ∠B are supplementary. m∠B is five times m∠A. What is m∠A and m∠B?

3. What is m∠B?

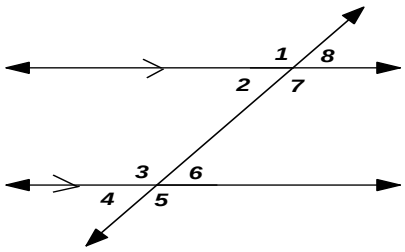


4. A triangle has sides that measure 15 ft. and 32 ft. Which of the following lengths could NOT represent the length of the third side of the triangle?

A. 17 ft. **B.** 21 ft. **C.** 35 ft. **D.** 40 ft.

5. If a triangle has NO congruent sides, then the triangle is . . .

Use for problems 6 and 7.



6. Which of the following is a pair of alternate interior angles?

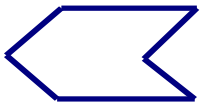
A. ∠2 and ∠6 **B.** ∠3 and ∠5 **C.** ∠5 and ∠6 **D.** ∠6 and ∠7

7. If m∠7 = (2x + 30)° and m∠2 = (3x – 10)°, then what is m∠4?

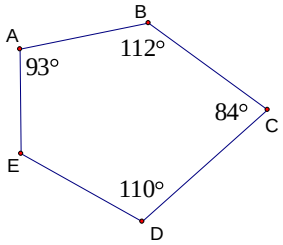
8. What is the sum of the measures of the interior angles of an octagon?

9. How many degrees are in each exterior angle of a regular decagon?

10. The polygon at right is a _____, and its **Concave / Convex.**



11. What is m∠A?



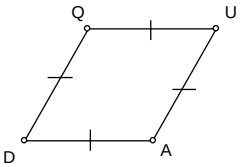
12. Diagonals of a parallelogram are PERPENDICULAR.

A. Always **B.** Sometimes **C.** Never

13. Which of the following ARE parallelograms?

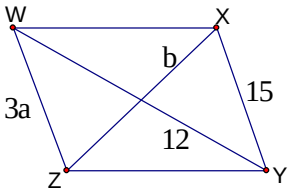
A. Rectangle **B.** Rhombus **C.** Square **D.** Trapezoid

14. In the quadrilateral shown, the angles are congruent.



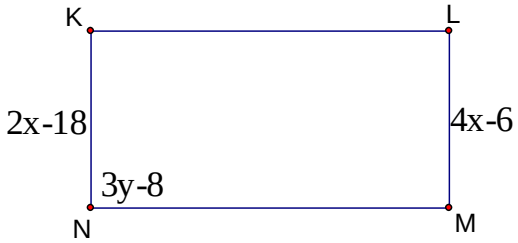
A. Always **B.** Sometimes **C.** Never

15. WXYZ is a rhombus. What are the values of *a* and *b*?



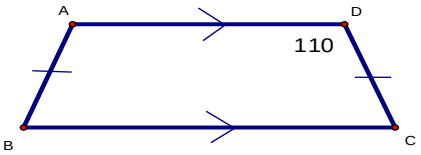
16. KLMN is a rectangle. What is the value of *x*?

17. KLMN is a rectangle. What is the value of *y*?



Use for problems 16 - 17.

18. What is m∠C?



19. Which statement(s) are **never** true about a trapezoid?

A. 1 pair of opposite sides are ≅.

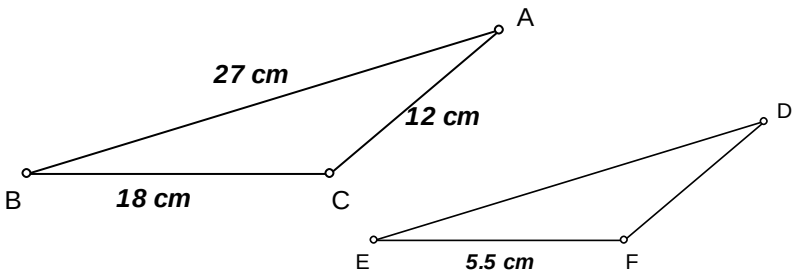
B. The diagonals are congruent.

C. 2 pairs of parallel sides

D. 4 ≅ angles

20. ΔXYZ ~ ΔQRS. XY = 12, YZ = 18, and QR = 9. What is RS?

21. ΔABC ~ ΔDEF. What is ED?



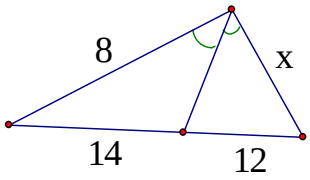
22. Equilateral triangles are _____ Congruent.

A. Always

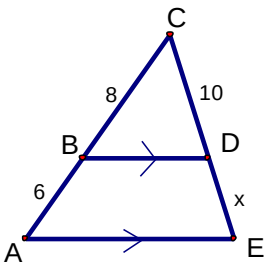
B. Sometimes

C. Never

23. Find the value of *x*.



24. Find the value of *x*?



25. What is the length of a diagonal of a 8 ft x 11 ft rectangle?

26. A right triangle has legs measuring 3m and 6m. What is the length of the hypotenuse?

27. Which cannot be the sides of a right triangle?

A. 9, 4, 15 **B.** 3, 4, 5 **C.** 2.5, 6, 6.5 **D.** 45, 47, 90

28. What type of triangle has sides that measure 8 cm, 12 cm, and 14 cm?

A. Acute Δ **B.** Obtuse Δ **C.** Right Δ **D.** Not a Δ

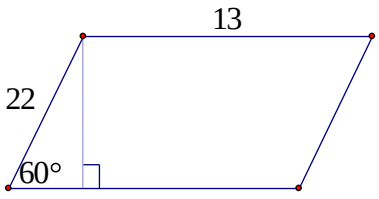
29. What is the length of a side of a square containing a diagonal that measures 20 units?

30. What is the length of the side of an equilateral triangle with an altitude that measures 6 cm?

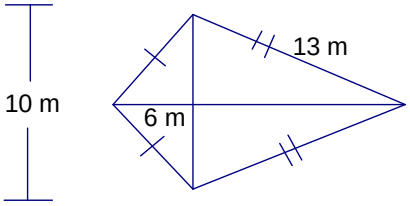
31. The diagonal of a square is 14 cm. What is the area?

32. What is the area of an equilateral triangle with a perimeter of 18 in.?

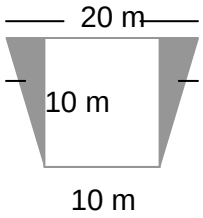
33. What is the area of the parallelogram?



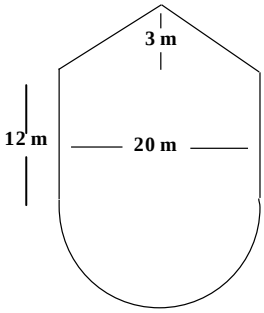
34. What is the area?



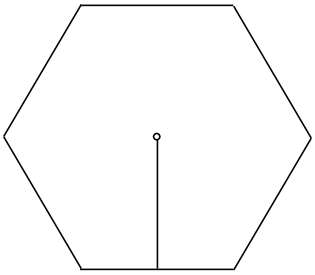
35. What is the area of the shaded region?



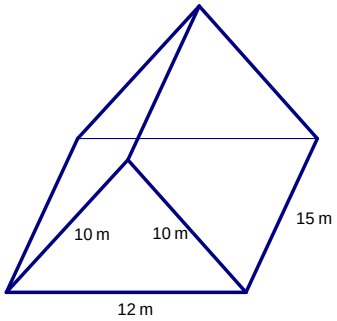
36. What is the area of this shape?



37. What is the area of a regular hexagon with sides 18 cm?

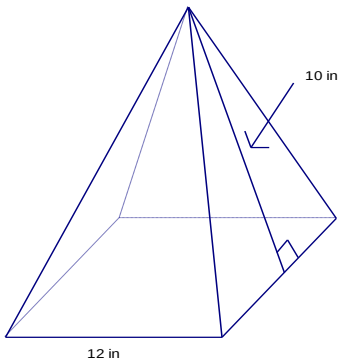


38. What is the SURFACE AREA of this right prism?

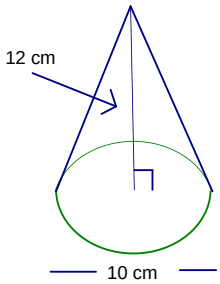


39. What is the VOLUME of a sphere with a diameter measuring 8cm?

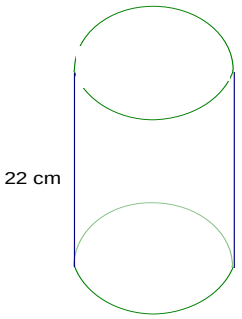
40. What is the VOLUME?



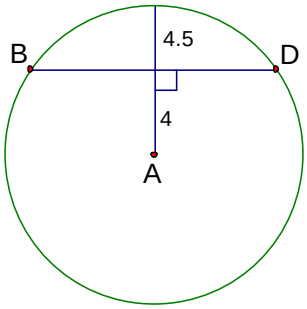
41. What is the SURFACE AREA?



42. The circumference of the base is 16π cm. What is the VOLUME?



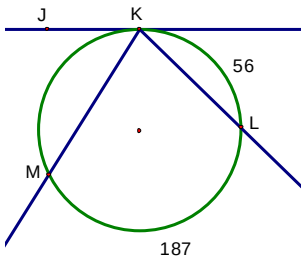
43. What is CD?



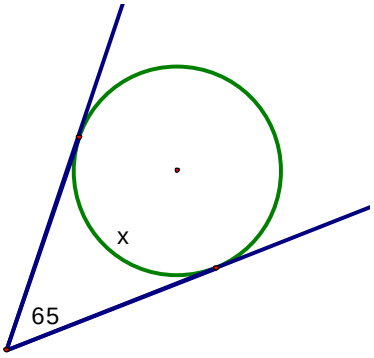
44. Which arc has a length of 5π units?

A. arc measures 45° and radius is 10 units
B. central angle measures 90° and radius is 10 units
C. arc measures 90° and radius is 5 units
D. central angle measure 45° and diameter is 20 units

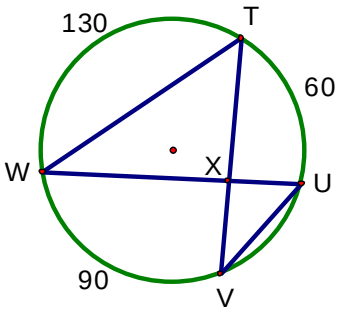
45. What is m∠MKL?



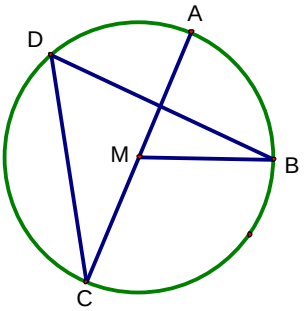
46. Find x.



47. What is m∠VXW?

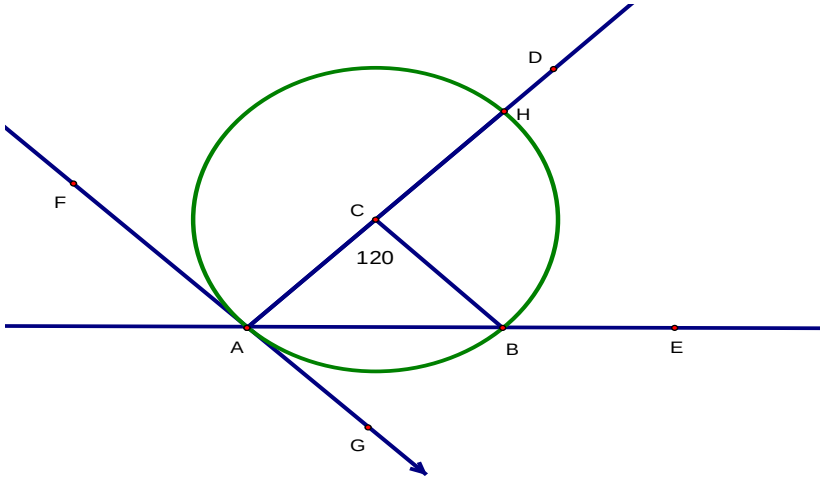


48. In Circle M, m∠AMB = 83°. What is m∠CDB?



Given: Circle C

Use for problems 49 - 60.



MATCHING. Identify each as either a radius, tangent line, arc, secant line or diameter.

49. $\overleftrightarrow{FG}$

50. $\overline{AH}$

51. $\overline{BC}$

52. $\overleftrightarrow{AB}$

Find the measure of each:

53. $m\overset{\frown}{BH}$

54. $m\overset{\frown}{AB}$

55. $m\angle BCH$

56. $m\overset{\frown}{ABH}$

Identify as either a semicircle, inscribed angle, major arc, minor arc or a central angle.

57. AHB

58. $\overset{\frown}{ABH}$

59. $\angle BCH$

60. $\overset{\frown}{HB}$

AREA FORMULAS

Square $A = s^2$

Rectangle $A = bh$

Parallelogram $A = bh$

Rhombus $A = \frac{d_1 \cdot d_2}{2}$

Kite $A = \frac{d_1 \cdot d_2}{2}$

Trapezoid $A = \frac{(b_1 + b_2)h}{2}$

Triangle $A = \frac{bh}{2}$ or $\frac{1}{2}bh$

Eq. Triangle $A = \frac{s^2\sqrt{3}}{4}$

Reg. Polygon $A = \frac{1}{2}aP$

Circle $A = \pi r^2$

$C = 2\pi r$ or πd

30-60-90 Triangle

$hyp = 2short$

$long = short\sqrt{3}$

45-45-90 Triangle

$hyp = leg\sqrt{2}$

Pythagorean Thm

$c^2 = a^2 + b^2$

PRISM/CYLINDER

$L = Ph$ $S = L + 2B$

$V = Bh$

PYRAMID/CONE

$L = \frac{1}{2}Pl$ $S = L + B$

$V = \frac{1}{3}Bh$

SPHERES

$S = 4\pi r^2$ $V = \frac{4\pi r^3}{3}$

(n-2)180 → total interior degress for any n-sided polygon